

REMARKS

The indication that claims 5-6 have been allowed and that claim 19 includes patentable subject matter is acknowledged with thanks. In reliance thereon, claim 19 has been amended into independent form by adding the subject matter of claims 1 and 17 thereto. Allowance of claim 19 is respectfully requested.

Claim 1 has been amended to provide that the detection antenna comprises a plurality of capacitive proximity sensors that each includes only a single measurement electrode. Support for the amendment is found, for example, at page 4, lines 17-19 (sequential measurement of capacitance between each electrode and the body/object), page 5, lines 11-13 (distance is measured "successively on each antenna electrode"), page 7, line 31 through page 8, line 1 ("one distance per electrode"), and page 12, lines 13-14 (distance measured for each electrode).

Claims 1, 4, and 11 were rejected as unpatentable over KRONBERG 5,315,884 in view of ROZIERE et al. FR 2 756 048. Claims 2 and 9 were rejected further in view of VRANISH 5,373,245; claim 7 was rejected further in view of COVELEY 5,952,835; claim 8 was rejected further in view of STANLEY et al. 6,703,845; claims 10, 12, and 14 were rejected further in view of LANE 5,623,552; claim 13 was rejected further in view of CRAWFORD 2002/0122006; claim 15 was rejected further in view of LIND 6,225,939; claim 16 was rejected further in view of MCDONNELL et al. 6,348,862; claim 17 was rejected further in view of HABRAKEN

et al. 5,883,935; and claim 20 was rejected further in view of TRAVANTY et al. 4,987,583. Reconsideration and withdrawal of the rejections are respectfully requested.

Claim 1 is allowable because the references do not disclose or suggest that the detection antenna comprises a plurality of capacitive proximity sensors that each includes only a single measurement electrode, where electronic means for exciting the electrodes comprise, for each detection antenna, a floating capacitive bridge or with floating excitation, cooperating with polling means to measure sequentially the respective capacitances between each of the measurement electrodes and the object or body to be measured.

The Official Action points to Figure 2 (plate array 30) of KRONBERG for the capacitive proximity sensors. However, these sensors each include plural measurement electrodes, not "only a single measurement electrode" as now claimed. There is no suggestion in the proposed combination to use only a single measurement electrode and thus the amended claims avoid the rejections under §103.

By way of further explanation, the technique of frequency modulation used by KRONBERG requires two electrodes. In amended claim 1, each measurement of distance between the antenna and the object is directly given by measuring the capacitance between only one electrode constituting part of the antenna and the object, and not an empirical deduction of the

variation between two capacitance electrodes as disclosed by KRONBERG.

Further, one of ordinary skill in the art at the time the invention was made would not be motivated to combine KRONBER with ROZIERE because in KRONBERG the variation of capacity is measured using the principle of the frequency modulation (see in particular column 2 lines 27-36, column 2 lines 44-50), whereas ROZIERE rather describes an electronic system functioning on the principle of the amplitude modulation (see, in particular page 8, lines 3-10). It would not have been obvious to one of ordinary skill in the art at the time the invention was made to combine KRONBERG with ROZIERE.

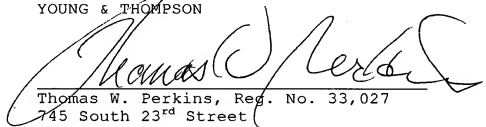
Moreover, the incorporation of the floating capacitance bridge with polling means as taught by ROZIERE into the system of KRONBERG by one of ordinary skill in the art at the time the invention was made does not lead to the present invention as claimed in amended claim 1. Each of these references discloses at least two electrodes per sensor, whereas the present claim 1 defines only one electrode per sensor. Therefore, it is believed that the presence of a floating capacitive bridge cooperating with polling means to measure sequentially the respective capacitances between each measurement electrode and the object or body to be measured, provides claim 1 with novelty and nonobviousness over the proposed combination.

In view of the present amendment and the foregoing remarks, it is believed that the present application has been placed in condition for allowance. Reconsideration and allowance are respectfully requested.

The Commissioner is hereby authorized in this, concurrent, and future replies, to charge payment or credit any overpayment to Deposit Account No. 25-0120 for any additional fees required under 37 C.F.R. § 1.16 or under 37 C.F.R. § 1.17.

Respectfully submitted,

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A large, stylized handwritten signature in dark ink, appearing to read "Thomas W. Perkins", is written over the printed name and address.

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